UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,689	09/27/2001	Lisa Denney	1875.0480000	8993

26111   7590   07/18/2008
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER
PHAN, MAN U

ART UNIT	PAPER NUMBER
2619	

MAIL DATE	DELIVERY MODE
07/18/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 April 2008*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
     Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Response to Amendment and Argument

1.   This communication is in response to applicant's 12/13/2006 Amendment in the

application of Denney et al. for the "Method and system for upstream priority look up at physical

interface" filed 09/27/2001.   This application is a Request for Continued Examination (RCE)

under 37 C.F.R. 1.114 filed on August 13, 2007.   The amendment and response has been entered

and made of record.   Claims 1, 19, 20, 26 have been amended and new claims 34-38 have been

added.   Claims 1-38 are pending in the application.

2.   Applicant's remarks and argument to the rejected claims are insufficient to distinguish

the claimed invention from the cited prior arts or overcome the rejection of said claims under 35

U.S.C. 103 as discussed below.   Applicant's argument with respect to the pending claims have

been fully considered, but they are not persuasive for at least the following reasons.

3.   In response to Applicant's argument that the reference does not teach or reasonably

suggest the functionality upon which the Examiner relies for the rejection.   The Examiner first

emphasizes for the record that the claims employ a broader in scope than the Applicant's

disclosure in all aspects.   In addition, the Applicant has not argued any narrower interpretation of

the claim limitations, nor amended the claims significantly enough to construe a narrower

meaning to the limitations. Since the claims breadth allows multiple interpretations and

meanings, which are broader than Applicant's disclosure, the Examiner is <u>required</u> to interpret

the claim limitations in terms of their broadest reasonable interpretations while determining

patentability of the disclosed invention. <u>See</u> MPEP 2111. In other words, the claims <u>must</u> be

given their broadest reasonable interpretation consistent with the specification and the

interpretation that those skilled in the art would reach. See *In re Hyatt*, 211 F.3d 1367, 1372, 54

USPQ2d 1664, 1667 (Fed. Cir. 2000), *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464,

1468 (Fed. Cir. 1999), and *In re American Academy of Science Tech Center*, 2004 WL 1067528

(Fed. Cir. May 13, 2004). Any term that is not clearly defined in the specification <u>must</u> be given

its plain meaning as understood by one of ordinary skill in the art. See MPEP 2111.01. See also

In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989), *Sunrace Roots Enter.*

Co. v. SRAM Corp., 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003), *Brookhill-*

Wilk 1, LLC v. Intuitive Surgical, Inc., 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir.

2003). The interpretation of the claims by their broadest reasonable interpretation reduces the

possibility that, once the claims are issued, the claims are interpreted more broadly than justified.

See *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). Also,

limitations appearing in the specification but not recited in the claim are not read into the claim.

See *In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)*. Therefore, the failure

to significantly narrow definition or scope of the claims and supply arguments commensurate in

scope with the claims implies the Applicant intends broad interpretation be given to the claims.

The Examiner has interpreted the claims in parallel to the Applicant in the response and

reiterates the need for the Applicant to distinctly define the claimed invention.

4.   Applicant's argument with respect to the rejected claims that the cited references fail to

teach or suggest the novel concept of "*a classifier for detecting an identifier from the burst,*

wherein the identifier is matched to a priority indicator" and *"wherein the detecting occurs at*

the physical interface prior to data link layer protocol processing". However, the references are

applied herein for the teaching of a method and system for classifying and prioritizing signals at

the physical interface of a headend device. The Applicant's attention is directed to Fig. 2 of

Tsao et al. (US#2002/0131413) for scheduling packets comprising the steps of: receiving a

packet; identifying a flow for the packet; classifying the packet based on the identified flow; and

buffering the packet in one of a plurality of queues (*priority queues*) based on the classification

of the packet (*the process of determining a priority classification*). In general, cable modem

scheduler is responsible for multiplexing the internal traffic, (i.e., requesting the necessary

bandwidth that cable modem needs to transfer its current types of data). Cable modem scheduler

must take into consideration the different priorities given to the current data to be transferred and

to request bandwidth from CMTS accordingly.

It's noted that in the upstream direction of CMTS communication, priority rules are

applied to the packets of individual TCP connections at the entry point to the TCP spoofing

kernel. These rules allow a customer to control which spoofed applications have higher and

lower priority access to spoofing resources. Upstream prioritization is also applied before

forwarding packets to the WAN. This allows a customer to control the relative priority of

spoofed TCP connections with respect to unspoofed TCP connections and non-TCP traffic (as

well as to control the relative priority of these other types of traffic with respect to each other).

Since no substantial amendments have been made and the Applicant's arguments are not

persuasive, the claims are drawn to the same invention and the text of the prior art rejection can

be found in the previous Office Action. Therefore, the Examiner maintains that the references

cited and applied in the last office actions for the rejection of the claims are maintained in this office action.

Claim Rejections - 35 USC ' 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7.   Claims 26, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nazarathy et al. (US#6,490,727) in view of Tsao et al. (US#2002/0131413).

     With respect to claims 26, 27, Nazarathy et al. (US#6,490,727) and Tsao et al. (US#2002/0131413) disclose a novel system and method for classifying and prioritizing signals at the physical interface of a headend device, according to the essential features of the claims. Nazarathy et al. (US#6,490,727) discloses in Figs. 10-11 block diagrams illustrated methods

and systems for controlling communications traffic across an upstream traffic channel at a

headend of a cable modem termination system (CMTS), including a burst receiver, a spectrum

analyzer for analyzing data stream received by the burst receiver, and a media access controller

interface that receives a command from a media access controller, wherein the spectrum

analyzer provides a spectral analysis of a packet received by the burst receiver and

corresponding to a subscriber ID (SID) provided by the command from the media access

controller (Col. 9, lines 54 plus).

However, Nazarathy does not disclose expressly the classifier for detecting an identifier,

which is matched to a priority indicator. In the same field of endeavor, Tsao et al.

(US#2002/0131413) teaches in Figs 1 & 2 the diagrams illustrated the method for scheduling a

packet, comprises receiving a packet; identifying a flow for the packet; classifying the packet

based on the identified flow; and buffering the packet in one of a plurality of queues based on the

classification of the packet (priority storage) ([0007]-[0008]). Packet arrival module 106

receives packets from input port 102, identifies each packet's flow, and places each packet in its

corresponding flow queue. Packet arrival module 106 determines the number n and identification

of flow queues 112.sub.1-112.sub.n based upon information received from packet departure

module 110 via path 124. Packet arrival module 106 may also provide notification, e.g., to

packet departure module 110 via processor 104, when a packet arrives for a new flow to be

serviced by node 100. Furthermore, packet arrival module 106 may notify pre-order queuing

module 108, e.g., if there are no other packets for a particular flow. As shown in FIG. 1, packet

arrival module 106 comprises a set of flow queues 112-112.sub.n, where n is the number of

flows currently being serviced by node 100. Packet arrival module 106 may be implemented

using any combination of hardware logic and software. Packet arrival module 106 may use

processing functions of processor 104 to execute instructions in software. Below is one example

of pseudo-code called "PKT_Arrival" which may be used by packet arrival module 106 to place

each packet into its corresponding flow Fq (i.e., one of flow queues 112.sub.1-112.sub.n)

([0026]-[0051]). Tsao et al. (US#2002/0131413) further teaches in Fig. 2 for scheduling packets

comprising the steps of: receiving a packet; identifying a flow for the packet; classifying the

packet based on the identified flow; and buffering the packet in one of a plurality of queues

(*priority queues*) based on the classification of the packet (*the process of determining a priority*

classification). In general, cable modem scheduler is responsible for multiplexing the internal

traffic, (i.e., requesting the necessary bandwidth that cable modem needs to transfer its current

types of data). Cable modem scheduler must take into consideration the different priorities given

to the current data to be transferred and to request bandwidth from CMTS accordingly.

It's noted that in the upstream direction of CMTS communication, priority rules are

applied to the packets of individual TCP connections at the entry point to the TCP spoofing

kernel. These rules allow a customer to control which spoofed applications have higher and

lower priority access to spoofing resources. Upstream prioritization is also applied before

forwarding packets to the WAN. This allows a customer to control the relative priority of

spoofed TCP connections with respect to unspoofed TCP connections and non-TCP traffic (as

well as to control the relative priority of these other types of traffic with respect to each other).

One skilled in the art would have recognized the need for classifying and prioritizing

signals at the physical interface of a headend device, and would have applied Tsao's teaching

of the priority order in scheduling packets into Nazarathy's novel use upstream burst receiver in

managing traffic in a communications channel. Therefore, It would have been obvious to a

person of ordinary skill in the art at the time of the invention was made to apply Tsao's method

and apparatus for scheduling for packet-switched networks into Nazarathy's distributed

termination system for two-way hybrid networks with the motivation being to provide a

method and system for controlling the communications traffic across an upstream traffic

channel at a headend of a cable modem termination system (CMTS).

8.   Claims 28-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nazarathy et

al. (US#6,490,727) in view of Tsao et al. (US#2002/0131413) as applied to the claims above,

and further in view of McConnell et al. (US#6,108,307).

    With respect to claims 28, 29, 36, Nazarathy et al. (US#6,490,727) and Tsao et al.

(US#2002/0131413) disclose the claimed limitations discussed in paragraph 5 above.

However, these claims differ from the claims above in that the claims require the feature

wherein the priority storage includes a lookup table with records of all assigned IDs. In the

same field of endeavor, McConnell et al. (US#6,108,307) discloses in Fig. 3 a schematic block

diagram illustrated a frame service device for the allocation of messages into multiple queues,

in which frame processor 46 having a frame input port 44. The frame processor 46 receives

each message frame from the network via the frame input port 44. When a frame arrives, the

frame processor reads the DLCI bits 30 in address field 15 of the frame message. The frame

processor accesses a lookup table 47 located in memory space 48 in order to assign a

predetermined priority level for a message having the DLCI of the message received by the

frame processor 46 (Col. 2, lines 33 plus and Col. 5, lines 48 plus).

Regarding claims 30-33, McConnell further teaches in Fig. 4 a flow chart showing the

frame allocation steps of multiple priority queuing, in which at step 68, the priority queues (Q1-

Q4) associated with priority order (P1-P4) (Col. 6, lines 12 plus). As shown in Figs. 3 & 4,

four queues are implemented, which each correspond to a particular class of service associated

with the virtual connections of the network node to which the frame processing apparatus 43

pertains. For instance, the queues 50, 52, 54, 56 may respectively represent high priority,

medium priority, low priority and best effort priority levels, respectively. The high priority

level will be associated with Frame Relay connections whose service class will only be

permitted to degrade last if congestion occurs. The best effort priority level pertains to Frame

Relay connections whose service class will be permitted to degrade first if network congestion

occurs. The intermediate priority levels will therefore relate to Frame Relay connections having

intermediate service classes. Where the Frame Relay connections are mapped to equivalent

quality of service parameters on an ATM backbone, the medium priority level may be

associated with Frame Relay connections which will use a non-real time Variable Bit Rate (nrt-

VBR) quality of service, if available. Similarly, the low priority level may be associated with a

Frame Relay connection utilizing an Available Bit Rate (ABR) quality of service on the

backplane, if available. In whatever manner the priority levels are assigned to the various

Frame Relay connections for a node, the assigned priority levels are stored in lookup table 47

of frame processing apparatus 43 (Col. 6, lines 25 plus).

Regarding claims 37-38, Tsao further teaches in Fig. 1 illustrates a node 100 utilizing the

PDRR architecture in accordance with principles of the present invention, in which packet

arrival module 106 comprises a set of flow queues 112-112.sub.n, where n is the number of

flows currently being serviced by node 100. Packet arrival module 106 may be implemented

using any combination of hardware logic and software. Packet arrival module 106 may use

processing functions of processor 104 to execute instructions in software ([0026]).

Regarding claims 1-25, 34-35, they are method claims corresponding to the system claims

26-33 above. Therefore, claims 1-25 are analyzed and rejected as previously discussed with

respect to claims 26-33.

One skilled in the art would have recognized the need for classifying and prioritizing

signals at the physical interface of a headend device, and would have applied McConnell's

priority queue associated with priority order, and Tsao's teaching of the priority order in

scheduling packets into Nazarathy's novel use upstream burst receiver in managing traffic in a

communications channel. Therefore, It would have been obvious to a person of ordinary skill

in the art at the time of the invention was made to apply McConnell's frame relay priority

queues to offer multiple service classes, and Tsao's method and apparatus for scheduling for

packet-switched networks into Nazarathy's distributed termination system for two-way hybrid

networks with the motivation being to provide a method and system for controlling the

communications traffic across an upstream traffic channel at a headend of a cable modem

termination system (CMTS).

Conclusion

9.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

The Thi et al. (US#2002/0061012) is cited to show the cable modem with voice

processing capability.

The Buckman et al. (US#7,095,715) is cited to show the system and method for processing network packet flows.

The Rich et al. (US#7,327,727) show the atomic lookup rule set transition.

The Tsao et al. (US#7,236,491) is cited to show the method and apparatus for scheduling for packet-switched networks.

10.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION THIS ACTION IS MADE FINAL**. See MPEP ' 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jay Patel, can be reached on (571) 272-2988. The fax phone number for the

organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (571) 272-2600.

12.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information for

unpublished applications is available through Private PAIR only. For more information about

the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to

the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-

9197.

Mphan

July 16, 2008

/Man Phan/

Primary Examiner, Art Unit 2619